Environmental Toxicology

Department Information

Environmental Toxicology web site
http://www.southalabama.edu/graduatemajors/etox/

The University of South Alabama offers an interdisciplinary curriculum to teach graduate students the biochemical and physiological processes resulting from the interactions between toxic compounds and the biosphere. Students in this program will learn to:

• evaluate the impact of specific pollutants in the environment
• perform laboratory and field-tests to monitor environmental pollutants
• control and manage toxic substances
• identify water and air pollutants
• review current and new legislation and protocols in this area

Graduates from this program will be able to work in industrial settings in the areas of Industrial Hygiene, Environmental Health, Environmental Engineering and Toxicology or to continue their education by pursuing a Ph.D. degree in Toxicology or related areas. In addition, these graduates will be qualified for jobs requiring M.S. degrees in their original areas of concentration. For example, a chemist or a chemical engineer will be better qualified to work in a chemical or pharmaceutical company if, in addition to his/her background in chemistry or engineering, the applicant has training in toxicology to address the environmental impact of specific projects.

Admission

Students applying to this program must fulfill all the requirements for admission specified by the Graduate School. Additional requirements include:

• B.S./B.A. degree from an accredited four-year institution: the program is designed for graduates holding degrees in Biology, Biomedical Sciences, Chemistry, Engineering or related fields.
• An undergraduate GPA of 3.00 or above is preferred. Under exceptional circumstances, students with an undergraduate GPA below 3.00 will be considered.
• The GRE will be required and will be considered among the admission criteria.
• In addition, students applying to this program must have completed the following undergraduate courses:
  • Biology (1 semester)
  • Statistics (1 semester)
  • Calculus (1 semester)
  • Organic Chemistry (2 semesters)
• It is recommended (but not required) that students applying to the program also complete 6 credit hours of undergraduate Biochemistry and have satisfied any other prerequisites needed for specific courses within each concentration. Those students who did not take undergraduate Biochemistry will have to include 6 hours of graduate Biochemistry among the required courses to complete the program. This will not change the total number of hours required to complete the program.

Deadline For Application For Environmental Toxicology

Applications are accepted in the Fall, Spring, and Summer semesters by the deadlines indicated in the University of South Alabama Bulletin.
Areas Of Study

Environmental Toxicology (MS)

Courses

Environmental Toxicology (EXT)

EXT 515 Environmental Toxicology 3 cr
Introduction to the scientific and technical principles of toxicological processes in the context of the ecosystem. Students will understand both the types of major environmental toxicants and how to properly evaluate their toxicity and factors that influence toxicity. Students will recognize and coherently formulate risk assessment and by using the tools and techniques acquired, develop and communicate proposals for remedy.

EXT 583 Entrepreneurship in Science 3 cr
This course will blend a variety of subjects from technical writing to patent law to laboratory development in an effort to provide a solid base for scientists to understand the development of technology. The course will provide a mechanism for scientists to transition technology from bench top to commercialization by providing information regarding financial resources coupled with research and laboratory development.

EXT 594 Directed Studies 1 TO 3 cr
Students pursue a research project under the direction of a graduate faculty member. The course requires special permission from the program director, to make sure that the study is in line with the curriculum that the student is pursuing.

EXT 599 Research Thesis 1 TO 6 cr
Research project directed by a member of the graduate faculty. Prerequisite: Approval of research prospectus by the graduate committee.